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Central Intelligence Agency

[redacted]

Washington, D.C. 20505

DIRECTORATE OF INTELLIGENCE

4 MAY 1987

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North Korea's Nuclear Efforts [redacted]

Summary

North Korea appears to be progressing toward helping improve its energy-short economy with the capacity to generate nuclear energy. [redacted] an indigenous nuclear reactor may be under way, although P'yongyang has yet to acknowledge the existence of the reactor or enter into a safeguards agreement as required by its December 1985 accession to the Nuclear Non-Proliferation Treaty (NPT).. With the June 1987 deadline for entering into a safeguards agreement approaching, we are uncertain why P'yongyang has delayed. [redacted]

[redacted]

[redacted]

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P'yongyang's Nuclear Efforts

P'yongyang's interest in nuclear power stems from its need for additional sources of energy as well as a desire to increase its international prestige.

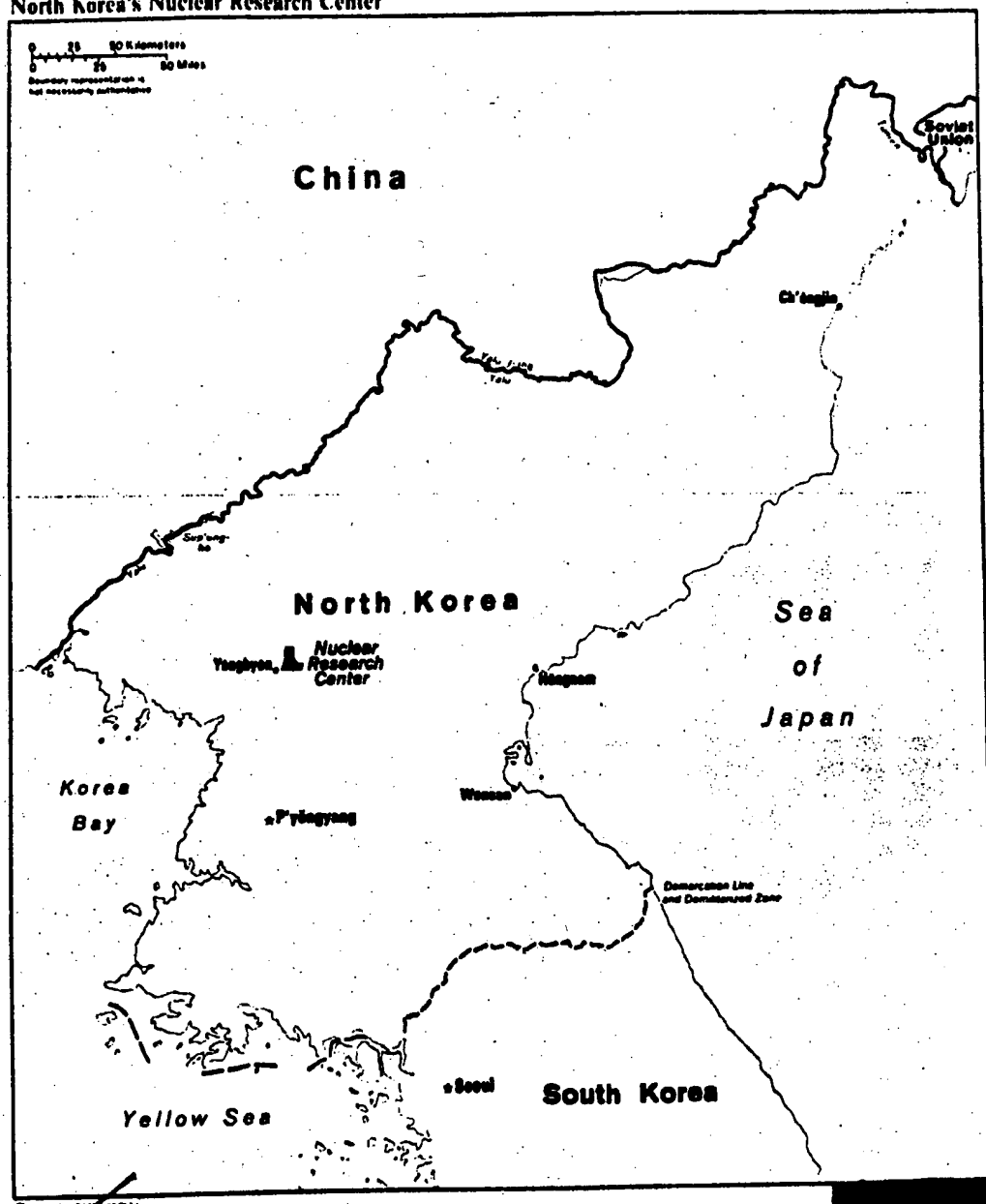
The Yongbyon Nuclear Research Center, the home of the North's research efforts, was established with Soviet assistance in the 1960s. Until the early 1980s, the Center consisted of an operations area with a small, 4-megawatt (MW) research reactor under IAEA safeguards and a large support area. Since an expansion program began in 1980, a 30-MW reactor and support buildings have been added. The reactor, which is graphite moderated, gas-cooled, and fueled with natural uranium, was completed in 1986

In our opinion, the new reactor could be a training facility to support P'yongyang's nuclear efforts or it could be used to augment an existing isotope-production capability. Generation of electric power is another possibility,

In our opinion, the reactor also could produce weapons-grade plutonium-

In addition to constructing a new reactor facility, we believe that P'yongyang probably has developed portions of the front end of the nuclear fuel cycle--uranium mining, milling, conversion, and fuel fabrication--to provide fuel for the reactor.

Figure 1
North Korea's Nuclear Research Center



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Exemptions: (b)(1), (b)(3)

The New Reactor, the NPT, and the Soviets

The North's need for additional help to advance its nuclear effort appears to underlie its accession to the NPT. In our opinion, Moscow was instrumental in inducing P'yongyang to sign the NPT in December 1985. The Soviets have been involved in North Korea's nuclear power program since at least 1956. In addition to providing technical assistance, Moscow has supplied a 4-MW research reactor and assisted in the construction of the Yongbyon Nuclear Research Center. Most recently the Soviets, apparently in response to P'yongyang's accession to the NPT, agreed to build at least one power plant that could be composed of as many as four 440-MW reactors. Neither side has announced the project's location, but the Soviet press [redacted] indicate this nuclear power plant will be built before 1993. [redacted]

Notwithstanding the Soviets' influence, the North's reluctance to publicly acknowledge the existence of its new reactor and bring it promptly under the NPT's safeguard provisions is a matter of concern. In accordance with the NPT, the North should enter into a safeguards agreement with the International Atomic Energy Agency (IAEA) within 18 months of accession, including assenting to on-site inspection of its declared nuclear facilities. [redacted]

The North's expanded nuclear program could include an effort to develop nuclear weapons, [redacted]

Outlook

In our judgment, P'yongyang could be waiting for an opportunity to announce the reactor's existence in a way that would gain maximum propaganda value. P'yongyang's declaration of its indigenous nuclear reactor would give the North an opportunity to project itself as a nation with technological prowess. Further, the North can point to its domestic nuclear efforts as proof of its national self-reliance and still accept further nuclear assistance from the Soviets. Given Moscow's role

in the North's nuclear power program and its decision to become a party to the NPT, [redacted]

The North Koreans' penchant for secrecy could explain in part P'yongyang's foot-dragging in implementing NPT provisions. But whatever their peculiarities, we believe there is good reason to closely scrutinize the implications of the delay in declaring the existence of the new reactor. [redacted]